

IN THE CLAIMS

Claims 1-13 have previously been canceled without prejudice.

Please amend claims 14 - 23.

Please enter the pending claims as follows:

1.-13. (Canceled)

14. (Currently Amended) An apparatus comprising:

a magnetron, said magnetron capable of generating microwave energy  
and sweeping frequency of said microwave energy;

a waveguide disposed proximate said magnetron, said waveguide  
coupled to an input aperture, said waveguide capable of transmitting said  
microwave energy;

a stirrer disposed proximate said waveguide, said stirrer capable of  
linear and rotational motion, said stirrer formed of a material that reflects  
said microwave energy, said stirrer to mix said microwave energy;

a susceptor disposed proximate said stirrer, said susceptor capable of  
linear motion and rotational motion, said susceptor formed of a material that  
does not absorb said microwave energy, said susceptor to further mix said  
microwave energy; and

a self-aligned mechanical joint held by said susceptor, said self-aligned mechanical joint disposed on a conveyor belt, said self-aligned mechanical joint disposed in an inert atmosphere, said self-aligned mechanical joint exposed to said microwave energy, said self-aligned mechanical joint comprising:

a bump disposed on a die, said die capable of absorbing said microwave energy, said microwave energy capable of being transformed into heat by molecular excitation; and

a solder alloy disposed on a substrate, said solder alloy capable of reflow by said heat through conduction from said bump.

15. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said microwave energy has variable frequency.

16. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said bump is capable of reflow by microwave energy.

17. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 16 wherein said microwave energy has variable frequency.

18. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said bump comprises copper.

19. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said bump is electroplated.

20. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said bump has a columnar shape.

21. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said solder comprises a eutectic solder of lead and tin.

22. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said solder comprises a binary alloy of tin and silver.

23. (Currently Amended) The apparatus ~~mechanical joint~~ of claim 14 wherein said solder comprises a ternary alloy of tin, copper, and silver.